FORMER INTERN EXPERIENCES: APPLIED SCIENCES PROGRAM, SENEY NATIONAL WILDLIFE REFUGE

Dr. Lindsey Shartell (2004)

I worked as an Applied Conservation Biology Intern at Seney NWR during the summer of 2004. This was just prior to my fourth and final year studying Biology and Environmental Science at Adrian College (Michigan). The internship introduced me to many new experiences and opportunities in the wildlife and forestry fields. During the internship I became interested in continuing on to graduate school and met my would-be Master's advisor from Michigan Technological University (MTU) through her work at Seney NWR. I continued to collaborate with Dr. Corace on a number of future projects after my initial internship ended, including contracts with the U.S. Fish & Wildlife Service for invasive species management and GIS assessments, sharp-tailed grouse telemetry, research on exotic earthworms as part of my PhD program at MTU, wildlife/GIS work as a post-doc with Wayne State University, and with current work with fire and wildlife as part of the Lake States Fire Science Consortium. The wildlife habitat and forestry work that I have collaborated on provided me valuable experience that I use in my current job as Forest Habitat Research Scientist for the Minnesota DNR.

Julia Polasik (2007)

In 2007 I worked as an Applied Conservation Biology Intern at Seney National Wildlife Refuge (NWR) under the direction of Dr. Greg Corace. When I arrived for the summer I had just finished my junior year of college in a Fisheries and Wildlife Science program at Paul Smith's College (New York). At that point in time my field experience was limited to experience gained in coursework, working two summers for a youth conservation corps crew, and working one summer doing watercraft inspections for invasive species and monitoring banded Common Loons. During my summer at Seney NWR, I assisted with a number of projects related to ecosystem management and developed an independent project comparing passerine communities in northern hardwood and mixed pine ecosystems through point count surveys. I also expanded my avian experience by assisting with Endangered Kirtland's Warbler research and management, and monitoring Common Tern colony reproductive output. As an intern I also gained experience in amphibian ecology and survey methods by monitoring anurans for ecotoxin affects and surveying anurans for relative abundance using vocalizations. In addition, I assisted with invasive plant research and management, as well as with forest ecosystem restoration research and management. My experience as an intern at Seney NWR was extremely valuable in guiding me toward my career path by providing the skills and knowledge to obtain other seasonal positions and a complete a graduate education with a thesis (University of Wyoming) on an endangered amphibian, the Wyoming toad. I now work as a Wildlife Biologist for the Bureau of Land Management in Buffalo, WY where I am using wildlife ecology knowledge to make land management decisions while considering multiple uses. With my current career position, I am still largely applying the ecological knowledge and professional skills that I gained as an Applied Conservation Biology Intern and greatly appreciate the opportunity I was given to spend a summer as an intern at Seney NWR.

Ellen Comes (2011)

I started as an Applied Sciences Program intern in 2011 between my sophomore and junior year of undergrad (University of Dayton, Ohio). I also returned the following summer to be a crew leader. As an intern, I was exposed to a variety of field methods and monitoring protocols, and that was the goal of my first year since I applied to the position in hopes of getting actual field experience outside of school. As crew leader, I was given the opportunity to take lead over the other intern and I took on my own small project within a research area of my interest. Prior to working with Dr. Corace, I had no concept of what it would mean for me to get my Master's degree, but throughout my internship I began to understand how important my Master's would be for me as I would one day have a career with an ecological focus. I learned a lot from this experience and it gave me a lot of the intuition and determination I needed as I went on to pursue graduate school. After my two summers as an intern, I have continued to work with Dr. Corace on a variety of projects, conducting data analysis and writing as needed. After completing my Master's degree in August of 2016, I have returned to work within the Applied Science Program as a Visiting Ecologist where I am continuing to be a part of a variety of projects performing data analysis and writing reports and supervising an undergraduate intern. I am certain that I would not be where I am today had I not been a part of the Applied Sciences Program and I know that many of the skills I developed over the years while working with Dr. Corace will help me in my future career.

Shelby Weiss (2014)

I came to Seney NWR to work as an Applied Sciences Program (ASP) intern after graduating from my undergraduate program in 2014 (Colorado State University). I worked with the ASP for two field seasons as an intern, and during the second season I acted as lead intern and held a supervisory role. Since my time as an intern, I have continued to stay involved with the ASP projects. For example, I am now a Master's student (Ohio State University) and have based one of my chapters on work I started conducting as an ASP intern. I think it is easy for me to point to my experiences at Seney and with the ASP as being heavily influential to my career thus far. As an intern I gained experience in a wide variety of areas, from wildlife surveys to forest mensuration to invasive plant management. I also developed a deep appreciation for forests and disturbance ecology as well as the complexity and nuance involved in making land management decisions. These are topics that I have since continued to study as a Master's student. Working as an intern with the ASP also required me to develop important problem-solving skills. Field work often has unexpected challenges - both in design and in logistical execution. Experiencing this first hand and being made to overcome these challenges was an invaluable experience.

Emma Doden (2015)

My time as an intern with the Applied Sciences Program at Seney NWR, in the summer of 2015, was my first experience working in the wildlife field, and it further reinforced that I was on the right career path. The internship greatly expanded my skillset and strengthened my resume. I enjoyed the variety of fieldwork that I participated in: from spraying herbicide on invasive species to conducting forest and vegetation assessments, to collecting data for research, to monitoring a common tern colony. The internship also gave me extensive experience with operating an ATV and navigating using a map, compass, and GPS. Work was challenging at times, with early mornings for secretive marshbird surveys and buggy conditions, but the beauty of the refuge balanced the difficulties. Working in the Applied Sciences Program also challenges you intellectually, unlike typical technician or field work positions. It

taught me to think critically and the value of integrating the scientific process into the management of ecosystems. With my undergraduate degree (University of Wisconsin-Stevens Point) now in hand, I am looking to pursue a graduate degree in which I can incorporate the mindset that was shaped by Applied Sciences Program.

Sarah Toner (2015)

When I was accepted to the Applied Sciences Program, I was a rising college freshmsn with a lot of knowledge about biology and conservation, but without much experience. Being an intern taught me many useful skills for my future career in field biology, from driving ATVs and traversing rough terrain to applying herbicides and conducting surveys of plant and animal communities. Furthermore, the program connected the work that I was doing with the long-term management of the refuge, helping me gain a broad understanding of how management is designed, implemented, and adapted.

I'm currently a sophomore at Cornell University studying Ecology and Evolutionary Biology and minoring in Natural Resources. As a result of my experience at Seney, I was accepted to an international research experience where I studied the biology of the Red-backed Fairywren in Australia; my experience with forestry metrics and field work was very helpful as I designed and implemented my own research project with the goal of publishing my research. The Applied Sciences Program gave me, a biologist at the beginning of her career, an excellent foundation that has enabled me to obtain other research opportunities and continue to develop my understanding of and experience with biology and ecology.

Lyndsay Morrison (2016)

I was an intern for Dr. Greg Corace during the 2016 field season and continued working with him into the Fall. When I came to the Seney National Wildlife Refuge I was a recent graduate of Central Michigan University with a Bachelor's degree in Biology-Natural Resources and a minor in Geographic Information Sciences. During the summer, I was the lead on the Michigan Marsh Bird Survey, I conducted Common Tern nest counts, conducted Black-backed Woodpecker surveys, conducted a Kirtland's Warbler survey, and sprayed herbicide to help manage invasive species on the refuge. I also helped Shelby Weiss with her M.S. research which looked at insect use among snags that had been created from fire, girdling, or from being topped. During the Fall of 2016 I updated various data sets and worked on other projectsm including determining whether land cover for the Breeding Bird Survey was representative of the refuge and whether there were differences in land cover among Black-backed Woodpecker transects with varying degrees of occurrences. As of now, I am still trying to figure what and where my next step will be professionally, but I am confident that my experiences at the Seney National Wildlife Refuge will be a huge asset in helping me along the way.